ASSOCIATION OF
FEDERAL COMMUNICATIONS CONSULTING ENGINEERS
WASHINGTON, D. C.

January 20, 1995

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
Room 222
1919 M Street, N.W.
Washington, D.C. 20554

Re: MM Docket No. 94-130

Dear Mr. Caton:

Enclosed are 10 copies (original and nine) of the comments prepared by this Association in the Notice of Proposed Rule Making, MM Docket 94-130, entitled, "In the Matter of Amendment of Parts 73 and 74 of the Commission's Rules to Permit Unattended Operation of Broadcast Station Transmitter Control and Monitoring Requirements".

If there are any questions or comments concerning this filing, please contact the undersigned.

Sincerely,

Donald G. Everist
1300 L Street, N.W., Suite 1100
Washington, D.C. 20005
(202) 898-0111

DGE:mcw
Enclosure

ASSOCIATION OF
FEDERAL COMMUNICATIONS CONSULTING ENGINEERS
WASHINGTON, D. C.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

Amendment of Parts 73 and 74 of the Commission's Rules to Permit Unattended Operation of Broadcast Station Transmitter Control and Monitoring Requirements.

MM Docket No. 94-130

COMMENTS OF THE ASSOCIATION OF FEDERAL COMMUNICATIONS CONSULTING ENGINEERS

I. INTRODUCTION

A. The Association of Federal Communications Consulting Engineers membership consists of over 100 registered professional engineers engaged in the practice of consulting engineering before the Federal Communications Commission.

B. AFCCE supports the Commission's goals of reducing burdens and costs on licensees and their duty operators.

II. PART I -- UNATTENDED OPERATION

A. AFCCE supports the Commission's basic premise that the requirement for a licensed duty operator [and the costs and burdens imposed by such a requirement] no longer appears to be necessary or appropriate. The reason is that many improvements in the last decade have been made in equipment stability, reliability and automatic control of transmission systems.

P.O. Box 19333, 20th Street Station, Washington, D.C. 20036-0333

B. DUTY OPERATOR REQUIREMENT

1. AFCCE supports the proposal to waive the requirement for duty operators at broadcast stations and thus permit their unattended operation. This will permit licensees to make more effective use of their resources by implementing operating and maintenance policies appropriate for their stations.

2. The Commission particularly solicits comments on the premise if duty operators are not generally necessary. Will this encourage negligent or irresponsible action on the part of certain broadcast licensees. If true, then this may result in excerbating interference levels in the various broadcast services. The following points can be made pertaining to this issue:

   a) It is in the licensee's competitive interest to maintain a properly operating facility.

   b) The Commission can address this issue in the future if such problems increase as a result of relaxation of the requirements of these rules.

   c) If a licensee has a history of egregious non-compliance, the Commission should be able to apply extraordinary operator, monitoring and record keeping requirements until FCC is satisfied that the licensee is in compliance.

   d) The Commission has a means of enforcement (assuming the field offices have sufficient resources).

3. AFCCE supports the Commission's efforts to place emphasis on technical integrity of emitted signals rather than with the method of transmitter control. The Commission should permit unattended operation of broadcast stations if they are ATS-equipped. An improperly operating transmission system would automatically be taken off-the-air. The licensee can establish a notification system that it deems sufficient.

4. Directional AM stations without approved sampling systems should be excluded from unattended operation under the proposed rules. In the interest of the Commission's goals of

reducing interference in the AM band, it should adopt policies wherever possible that encourage stations to install approved systems. This would be an incentive for licensees to establish such systems. This also relieves the Commission from the burden of determining if AM licensees without approved sampling systems can afford to install the appropriate equipment.

5. The Commission asks whether equipment is available which can confirm that a successful change has been made from the daytime to nighttime antenna pattern (and vice versa) and whether the appropriate transmitter power level can be verified. Such equipment exists and the Commission would spur the development of additional such equipment by allowing AM stations to automate these monitoring requirements. Verification can be made by comparing antenna monitor values with the licensed values, or by interlocks on the switches. When a power reduction is required, the actual power level should be monitored.

6. The Commission seeks comment on any other circumstances that may not lend themselves to effective unattended station operation. AM stations without approved sampling systems or any broadcast facility that has a record of egregious non-compliance should fall into this category. As mentioned above, the Commission should retain authority to dictate extraordinary monitoring requirements when it deems it necessary in specific situations.

7. The Commission seeks comment on the benefits derived by licensees from waiver or diminution of operator requirements. Under this method, the licensee will have the incentive to employ the most efficient means of ensuring compliance of its spectrum. The public will also benefit since the Commission will not be required to spend its resources on the administration of operator requirements and authorizations.

8. The AFCCE supports offering similar flexibility to low power TV stations, broadcast auxiliary, ITFS, and translator services, which are authorized under Part 74. Flexibility should also be granted to international broadcast stations authorized pursuant to

Subpart F or Part 73 and experimental broadcast stations authorized pursuant to Subpart A of Part 74. Experimental stations should be unattended only when the transmitters used are approved under Part 2 of the FCC rules. Again, the Commission should place more emphasis on technical integrity of emitted signals than on the method of transmitter control.

9. The Commission raises the issue of Section 318 of the Communications Act of 1934, which continues to prohibit waiver of the operator requirement where required by international agreement or where required for safety purposes. Safety issues would be addressed under the Commission's proposals in that an improperly operating station would be required automatically to cease operation. AFCCE believes that automated monitoring can often result in quicker resolution of interference problems than if a station uses a duty operator. If the Commission deems it necessary in specific instances, such as when an experimental broadcast operation has the potential to cause interference to a radio service critical to safety, it can order more strict monitoring requirements.

10. Tower lighting monitoring is a function that can be fully automated with existing technology. The requirements of Part 17 of the FCC rules are readily complied with by licensees in other services that permit unattended operation. Broadcast licensees should bear no greater regulatory burden than other services in his area.

11. Since the existing Emergency Broadcast System (EBS) system requires manual intervention, in part, it would be appropriate to establish the effective date for the waiver of the requirements for duty operators to coincide with the date that new Emergency Alert System (EAS) becomes mandatory for broadcasters. To the extent that stations convert to EAS in advance of the mandatory conversion date, however, they should be permitted to adopt the relaxed duty operator requirements.

III. PART II – RELATED RULE CHANGES AND OTHER CLARIFICATIONS

A. RESTRICTED PERMIT REQUIREMENT

1. For those stations that choose to retain a duty operator, the requirement for a Restricted Permit (RP) is completely unnecessary. The reason is that there are no special capabilities required for the RP, with the exception of being able to keep a log in English. The operator's duties presently require only signing on, and off, noting times of operation, tower lights, and EBS monitoring and activation, all of which will be unnecessary in the future. Therefore, the RP requirement has little or no impact on the quality of a broadcast station's operation. The costs cannot justify the benefits.

2. The Commission's proposals to eliminate certain metering requirements is appropriate for the reasons discussed in the NPRM (NPRM at paragraph 23).

B. CONTACT PERSON

1. The Commission should maintain a database of contact information so that it may contact broadcast licensees promptly. The Commission should maintain its requirements for the posting of contact information at transmitting facilities.

C. MAXIMUM TIME PERIOD FOR NON-COMPLIANCE CORRECTION

1. AFCCE supports the Commission's proposals to clearly establish procedures for continued operation with some out of tolerance conditions that pose little or no threat of increasing interference to other stations. AFCCE also urges removal of language that seems to suggest that it is permissible to continue to operate while trying to correct an out-of-tolerance condition that is capable of causing interference (NPRM at paragraphs 25-31).

2. The AFCCE believes, however that there should be several time periods specified for out-of-tolerance conditions. The three minute requirement (NPRM at paragraph 29) should only apply to situations where the out-of-tolerance condition is serious and likely to cause significant interference. ATS systems are not in widespread use in the broadcast industry today because the three minute termination clause in present rules is unduly restrictive.

3. A three minute time limit should pertain to circumstances where significant interference would be caused. If the power of the station is more than two times that authorized for the mode of operation, or where the modulation percentage exceeds 150% due to component malfunction a three minute time limit is appropriate. In each of these cases substantial interference may be caused by the continuation of the operation. AM propagation loss at night, and winter-summer effects for groundwave easily exceeds 2:1 (two-to-one) field ratios. Similarly, FM propagation assumption used in allotments is only statistical in nature, and there are wide variations of field strength due to the effects of propagation, particularly in the South in summer. Propagation losses in both services vary by more than 2:1 (two-to-one) corresponding with 4:1 (four-to-one) power ratios. Allowing a 2:1 (two-to-one) power allowance for short time failures is not unreasonable.

4. A two hour period would be much more appropriate where the power exceeds that authorized by less than two times, and cannot be remotely controlled to within permitted tolerances. This more generous time period will permit a technician to reach the transmitter to restore proper operation.

5. Failure of AM directional antennas to switch modes of operation has the potential for substantial interference. Failure of an AM directional antenna to switch can be considered as a major failure but as a special case. Since propagation does not change instantly, the potential for interference is negligible for the first half hour of operation after the change should have been effected. If an antenna fails to change modes, the licensee can reasonably have a one-half hour period to repair the malfunction. If the malfunction duration is more than one-half

hour after the prescribed time, then the station must suspend operation or reduce power within three minutes.

6. In the proposed provisions of §73.1350(d)(2) the phrase "reduced sufficiently to eliminate any excess radiation" is vague and impractical. Unless ratios of field strength between the different modes of operation have been precalculated, the licensee has no measure of how much reduction is necessary to eliminate excess radiation. It will take much more than three minutes to calculate what power is permitted, and much more than three minutes to verify that excess radiation is not produced. Additionally, the power levels permitted may be so low as to effectively interrupt service.

7. AFCCE proposes that failure of a transmission system to switch modes in an AM directional array should require termination of operation at the end of the one-half hour window or a reduction of power to 25% or less of the authorized power. Operation may continue for one period of operation at this level. If subsequent changes of mode fail, operation must be terminated or power reduced so that the field intensity in any direction does not exceed that authorized, or power reduced to 10% or less of the authorized power. Operation may not continue at this level for more than ten consecutive days without special temporary authority from the FCC. The procedures proposed in NPRM Paragraph 31 appear unduly restrictive.

8. Reliance on monitor points as final arbiters of proper antenna array performance may not be wise. Several proposals under MM Docket 93-177 suggest eliminating monitor point measurements due to their limited reliability. A much better arbiter would be to determine if the antenna monitor readings are within tolerance limits, with secondary reliance on monitor points. Comments in the same Docket propose reducing reliance on proof-of-performance measurements in favor of enhanced monitoring of AM directional antennas.

9. Correcting some problems in AM directional antenna systems require extensive adjustment over a period of several weeks.

These adjustments must be made at reasonable power levels to maintain service and to avoid having to scale readings. One of the most effective methods of tuning AM directional antennas requires several hundred adjustments to establish proper operation. The recommendation that monitor point measurements be made after each adjustment would eliminate one of the most powerful tools in tuning arrays and is, therefore, an impractical approach.

D. MONITORING REQUIREMENTS

1. AFCCE supports the Commission's monitoring proposals (NPRM at paragraphs 32-35). With regard to the Commission's specific concerns regarding frequency monitoring, AFCCE believes that current broadcast equipment is sufficiently stable to obviate the need for such monitoring. Furthermore, it is in the licensees interest to operate on the correct frequency. The Commission can request frequency readings if it deems appropriate in specific instances.

2. AFCCE believes that under-power and low-modulation conditions are sufficiently linked to the licensee's economic interest that the FCC need not regulate monitoring for these conditions.

3. AM directional array parameters (NPRM at paragraph 34) are not normally controlled as an operational parameter, except when switching mode of operation. AFCCE believes that the antenna monitor parameters should be monitored. For unattended operation, in the event that the antenna parameters drift out of range, (as opposed to a fail-to-switch condition) the appropriate action should be a reduction in power, not termination of operation, as outlined in Paragraph C.(2) above.

E. MEASUREMENT AND CALIBRATION REQUIREMENTS

AFCCE supports the Commission's proposal to address how measurement errors are taken into account (NPRM at paragraphs 37 and 38).

F. ADJUSTMENT OF THE TRANSMITTER AND ANTENNA SYSTEM

AFCCE supports the Commission's proposal to make more explicit the fact that adjustment of the transmission system must be performed by a technically qualified individual authorized by the licensee (NPRM at paragraph 39).

G. PERMISSIBLE CONNECTION METHODS FOR REMOTE CONTROL

AFCCE supports the Commission's proposal to allow licensees flexible connection methods for remote control (NPRM at paragraph 40).

Respectfully submitted,

ASSOCIATION OF FEDERAL COMMUNICATIONS CONSULTING ENGINEERS (AFCCE)

John F. X. Browne (DLE)

John F. X. Browne
President

January 20, 1995